

SEQUENCE LISTING

<110> Bayer AG, BHC

<120> Isolated photoprotein mtClytin, and the use thereof

<130> Le A 36 839

<160> 6

<170> PatentIn version 3.1

<210> 1

<211> 912

<212> DNA

<213> Clytia gregaria

<400> 1

```

gacagataaa aaattcactc cttagattat ttagtgaata agagaaaaaa aggataagaa      60
atcaagatgc aaagggtttac aaatcgtctt ctttccatgt cggcttttacg tgcaagatca      120
agattgcaac gcacggcaaa ttttcacacc agcatactct tggctacaga ttcaaaatac      180
gcgggtcaaac tcgatactga ttttgcaaat ccaaaatgga tcaacagaca caaatttatg      240
ttcaactttt tggacataaa cggtaagggg aaaatcacat tagatgaaat cgtctccaaa      300
gcttcagacg acatttgtgc taaactggat gcaacaccag aacagaccaa acgtcaccag      360
gatgctgttg aagccttttt caagaaaatg ggcattggatt atggtaaaga agttgcattc      420
ccagaattta ttaagggatg ggaagagttg gccgaacacg acttggaact ctgggtctcaa      480
aacaaaagta cattgatccg tgaatgggga gatgctgttt tcgacatttt cgacaaagac      540
gcaagtggct caatcagttt agacgaatgg aaggcttacg gacgaatctc tggaatctgt      600
ccatcagacg aagacgctga gaagacgttc aaacattgtg atttggacaa cagtggcaaa      660
cttgatgttg atgagatgac caggcaacat ttaggcttct ggtacacatt ggatccaact      720
tctgatggtc tttatggcaa ttttgttccc taagaagcgt tcagttaaaa acgctaaaca      780
ttgttcagtt gtaaaattat attcattttc atttcgtaaa attagtattt ataaatttgt      840
atcataaatt gtatccatgt tgtagactaa ataagactcg gcaaaaaaaaa aaaaaaaaaa      900
aaaaaaaaaa aa

```

<210> 2

<211> 228

<212> PRT

<213> Clytia gregaria

<400> 2

Met Gln Arg Phe Thr Asn Arg Leu Leu Ser Met Ser Ala Leu Arg Ala
 1 5 10 15
 Arg Ser Arg Leu Gln Arg Thr Ala Asn Phe His Thr Ser Ile Leu Leu
 20 25 30
 Ala Thr Asp Ser Lys Tyr Ala Val Lys Leu Asp Pro Asp Phe Ala Asn
 35 40 45
 Pro Lys Trp Ile Asn Arg His Lys Phe Met Phe Asn Phe Leu Asp Ile
 50 55 60
 Asn Gly Lys Gly Lys Ile Thr Leu Asp Glu Ile Val Ser Lys Ala Ser
 65 70 75 80
 Asp Asp Ile Cys Ala Lys Leu Asp Ala Thr Pro Glu Gln Thr Lys Arg
 85 90 95
 His Gln Asp Ala Val Glu Ala Phe Phe Lys Lys Met Gly Met Asp Tyr
 100 105 110
 Gly Lys Glu Val Ala Phe Pro Glu Phe Ile Lys Gly Trp Glu Glu Leu
 115 120 125
 Ala Glu His Asp Leu Glu Leu Trp Ser Gln Asn Lys Ser Thr Leu Ile
 130 135 140
 Arg Glu Trp Gly Asp Ala Val Phe Asp Ile Phe Asp Lys Asp Ala Ser
 145 150 155 160
 Gly Ser Ile Ser Leu Asp Glu Trp Lys Ala Tyr Gly Arg Ile Ser Gly
 165 170 175
 Ile Cys Pro Ser Asp Glu Asp Ala Glu Lys Thr Phe Lys His Cys Asp
 180 185 190
 Leu Asp Asn Ser Gly Lys Leu Asp Val Asp Glu Met Thr Arg Gln His
 195 200 205
 Leu Gly Phe Trp Tyr Thr Leu Asp Pro Thr Ser Asp Gly Leu Tyr Gly
 210 215 220
 Asn Phe Val Pro
 225

<210> 3

<211> 16

<212> PRT

<213> Clytia gregaria

<400> 3

Met Gln Arg Phe Thr Asn Arg Leu Leu Ser Met Ser Ala Leu Arg Ala
 1 5 10 15

<210> 4
 <211> 48
 <212> DNA
 <213> *Clytia gregaria*

<400> 4
 atgcaaaggt ttacaaatcg tcttctttcc atgtcggctt tacgtgca 48

<210> 5
 <211> 791
 <212> DNA
 <213> *Clytia gregaria*

<400> 5
 gatctcagct caacttgcaa taagtatcag atcaaatttt gcaactcaaa gcaaatcatc 60
 aacttcatca taatgactga cactgcttca aaatacgtcg tcaaactcaa gaccaacttt 120
 gaagatccaa aatgggtcaa cagacacaaa tttatgttca actttttgga cattaacggc 180
 aacggaaaaa tcactttgga tgaaattgtc tccaaagctt cggatgacat ttgcgcctaaa 240
 cttggagcta caccagctca aacccaacgt catcaggaag ctggtgaagc tttcttcaag 300
 aagattgggt tggattatgg caaagaagtc gaattcccag ctttcgttaa cggatggaaa 360
 gaactggcca aacatgactt gaaactttgg tcccaaaaca agaaatcttt gatccgcaat 420
 tggggagaag ctgtattcga cattttcgac aaggacggaa gtggctcaat cagtttggac 480
 gaatggaaaa catacggagg aatctctgga atctgtccat cagacgaaga cgctgaaaag 540
 accttcaaac attgcgattt ggacaacagt ggcaaacttg atgttgacga gatgaccaga 600
 caacatttgg gattctggta caccttggac cctaacgtcg atggtcttta tggcaacttt 660
 gtcccttaaa aacttttttt gctgtaaatt ctttacgggt tattttttca taattgtcat 720
 ttgattttta ctttgtttcg gaaaatgaaa aatattcttt attcagaaaa aaaaaaaaaa 780
 aaaaaaaaaa a 791

<210> 6
 <211> 198
 <212> PRT
 <213> *Clytia gregaria*

<400> 6
 Met Thr Asp Thr Ala Ser Lys Tyr Ala Val Lys Leu Lys Thr Asn Phe
 1 5 10 15
 Glu Asp Pro Lys Trp Val Asn Arg His Lys Phe Met Phe Asn Phe Leu
 20 25 30
 Asp Ile Asn Gly Asn Gly Lys Ile Thr Leu Asp Glu Ile Val Ser Lys
 35 40 45
 Ala Ser Asp Asp Ile Cys Ala Lys Leu Gly Ala Thr Pro Ala Gln Thr
 50 55 60
 Gln Arg His Gln Glu Ala Val Glu Ala Phe Phe Lys Lys Ile Gly Leu
 65 70 75 80

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Asp | Tyr | Gly | Lys | Glu | Val | Glu | Phe | Pro | Ala | Phe | Val | Asn | Gly | Trp | Lys | | | |
| | | | | 85 | | | | | 90 | | | | | | 95 | | | |
| Glu | Leu | Ala | Lys | His | Asp | Leu | Lys | Leu | Trp | Ser | Gln | Asn | Lys | Lys | Ser | | | |
| | | | 100 | | | | | 105 | | | | | | 110 | | | | |
| Leu | Ile | Arg | Asn | Trp | Gly | Glu | Ala | Val | Phe | Asp | Ile | Phe | Asp | Lys | Asp | | | |
| | | 115 | | | | | | 120 | | | | | 125 | | | | | |
| Gly | Ser | Gly | Ser | Ile | Ser | Leu | Asp | Glu | Trp | Lys | Thr | Tyr | Gly | Gly | Ile | | | |
| | | 130 | | | | | 135 | | | | | 140 | | | | | | |
| Ser | Gly | Ile | Cys | Pro | Ser | Asp | Glu | Asp | Ala | Glu | Lys | Thr | Phe | Lys | His | | | |
| 145 | | | | | | 150 | | | | 155 | | | | | 160 | | | |
| Cys | Asp | Leu | Asp | Asn | Ser | Gly | Lys | Leu | Asp | Val | Asp | Glu | Met | Thr | Arg | | | |
| | | | | 165 | | | | | 170 | | | | | 175 | | | | |
| Gln | His | Leu | Gly | Phe | Trp | Tyr | Thr | Leu | Asp | Pro | Asn | Ala | Asp | Gly | Leu | | | |
| | | | 180 | | | | | | 185 | | | | | 190 | | | | |
| Tyr | Gly | Asn | Phe | Val | Pro | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | 195 | | |